

NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT
WATER SUPPLY UPDATE
December 9, 2015

WATER SOURCE 1: NSJWCD PERMIT 10477

Projected 2016 Supply: None

No water is projected to be available under Permit 10477 during 2016 due to drought conditions. Water is generally available under Permit 10477 when end-of-September storage in Camanche and Pardee, plus projected run-off for the Mokelumne River, exceeds the total demands of prior right holders including riparians, East Bay Municipal Utility District (EBMUD) and Woodbridge Irrigation District as well as required fishery releases and stream carriage losses between Camanche and Woodbridge dam.

EBMUD prepares estimates of water availability for Permit 10477 in January or February based on conditions. We do not yet have EBMUD estimates for 2016.

WATER SOURCE 2: 2014 PROTEST DISMISSAL AGREEMENT BETWEEN NSJWCD, EBMUD, ETC.

Projected 2016 Supply: None

The 2014 Agreement provides that EBMUD shall provide additional dry year water for NSJWCD when certain conditions are met:

- Up to 6,000 acre feet (AF) when EBMUD's Projected End-of-September (EOS) Total System Storage (TSS) is greater than 550 TAF (after 6 TAF releases assumed for NSJWCD).
- Up to 3,000 AF when EBMUD's Projected End-of-September (EOS) Total System Storage (TSS) is greater than 525 TAF but less than 550 TAF (after 3 TAF releases assumed for NSJWCD).
- Water is not otherwise available to NSJWCD under Permit 10477 and the October 11, 1963 Agreement between NSJWCD and EBMUD.
- Water quality conditions in Camanche Reservoir are stable (28 TAF hypolimnion through October).
- Release of the Dry Year Supply will not cause a "dry" or "critically dry" year pursuant to Attachment 1 of the 1998 Joint Settlement Agreement.
- NSJWCD has submitted a request to EBMUD for the Dry Year Water on or before May 1st.

Current EBMUD total system storage (TSS) is 330 TAF. TSS needs to increase by 195 TAF before dry year may be available under the agreement.

Wednesday, December 9, 2015									
RESERVOIR ELEVATION AND STORAGE									
	Elevation		Storage		%	Max. Elev	Max. Storage	Rise	Spill
EBMUD	Feet	Change	Ac-Ft	Change	Full	Feet	Ac-Ft	cfs	cfs
MOKELUMNE									
Pardee	519.46	0.22	108,540	330	55%	567.65	197,950	11	0
Camanche	178.62	-0.15	103,170	-510	25%	235.50	417,120	269	0
TOTAL EAST BAY RES.			118,220	70	78%		151,670		
TOTAL EBMUD STORAGE			329,930	-110	43%		766,740		
PRECIPITATION (INCHES)									
		THIS YEAR			AVERAGE YEAR				
STATIONS		This Month	Season to-Date	% of Avg.	Season to-Date	Season Total			
MOKELUMNE AREA									
Camp Pardee	0.00	0.32	4.40	89%	4.97	21.56			
*Salt Springs PH	0.00	0.55	10.00	92%	10.85	45.51			
*Tiger Creek PH	0.00	0.33	7.63	71%	10.68	46.08			
*Calaveras Big Trees	0.00	0.53	10.06	82%	12.29	54.71			
*Caples Lake	0.00	0.46	9.81	84%	11.71	46.75			
Snow On Ground			16	82%	19				
Water Content			3.2	66%	4.9				
*4-Station Average	0.00	0.47	9.45	83%	11.39	48.28			

The JSA (Joint Settlement Agreement) dictates required fishery flows based on time of year and year-type. **The Current JSA Year Type is CRITICALLY DRY.**

WATER YEAR TYPE DETERMINATION

Year Type	Normal/Above	Below Normal	Dry	Critically Dry
Oct. - Mar. (1) (Pardee/Camanche Storage)	Max Allowable (2)	Max Allowable to 400 TAF	399 TAF to 270 TAF	269 TAF or Less
Apr. - Sep. (3) (Unimpaired runoff)	890 TAF or More	889 TAF to 500 TAF	499 TAF to 300 TAF	299 TAF or Less (4)

- Notes:
- (1) October through March minimum flows are determined by total Pardee and Camanche storage on November 5th. Year type storage limits are based on the capacities of Pardee and Camanche Reservoirs in 1995.
 - (2) Maximum allowable storage on November 5th, shall be determined in accordance with the Army Corps of Engineer’s Water Control Manual for Camanche Dam and Reservoir dated September, 1981.
 - (3) April through September minimum flows are determined by the water year unimpaired runoff into Pardee Reservoir as forecasted by DWR in the April 1st Bulletin 120 Report except when combined Pardee/Camanche Nov. 5 storage is projected to be less than 200 TAF.
 - (4) April through September minimum flows shall be critically dry whenever Nov. 5 combined Pardee/Camanche storage is projected to be 200 TAF or less based on the runoff forecast in DWR bulletin 120, beginning April 1st.

JSA Fishery Flows for critically dry years are set forth below. For a critically dry year type, the total JSA flow releases are expected to be 130 cfs from December to March, for a total release of about **31.4 TAF** between December and March.

Critically Dry Year Flows

Attachment 1

Critically Dry Year Flows Mokelumne River Minimum Flow Schedule (1)				Agreed Release From Camanche Dam (cfs)	Expected Flow Below Woodbridge Dam (cfs)
Life Stage	Period	Days			
Adult Immigration	10/1-10/15 (2)	15		100	15
Spawn/Incubation	10/16-10/31 (2)	16		130	75
	11/1-11/30 (3)	30		130	75
	12/1-12/31 (3)	31		130	75
Incubation/Alevin	1/1-1/31 (3)	31		130	75
	2/1-2/28 (3)	28		130	75
Fry Rearing	3/1-3/31 (3)	31		130	75
	4/1-4/15 (4)	15		130	75
	4/16-4/30 (4)	15		130	75
Fry Rearing/Juvenile Rearing/Outmigration	5/1-5/31 (5)	31		100	15
	6/1-6/30 (5)	30		100	15
Oversummer	7/1-9/30	92		100	15
Total Days		365			

- NOTES:
- (1) Due to changes in water conditions or to optimize fishery conditions, EBMUD may modify the above Flow Standards upon written concurrence of CDF&G and USFWS, provided the total quantity of water released for fishery purposes in Critically Dry year types is not less than the quantity provided by this flow schedule.
 - (2) During October, EBMUD will maintain minimum flows of 130 cfs below Camanche Dam, and will maintain minimum flows of 15 cfs from Oct. 1 - 15 and 75 cfs from Oct. 16 - 31 below WID dam in Critically Dry year types.
 - (3) During the period when WID dam boards are pulled out and Lodi Lake is empty (approximately Nov. 1 through March 31), EBMUD shall make minimum releases of 130 cfs from Camanche Dam in Critically Dry year types. This release from Camanche dam is expected to provide 75 cfs below WID dam during this period. However, EBMUD shall not be obligated to increase releases above 130 cfs during this period in Critically-Dry year types.
 - (4) During April, EBMUD will maintain minimum flows of 130 cfs below Camanche Dam and 75 cfs below WID's dam in Critically Dry year types.
 - (5) During May and June outmigrating smolts will be trapped, tagged, and transported around the Delta in Critically Dry year types.

CITY OF LODI TRANSFER AGREEMENT

NSJWCD's obligation to transfer up to 1,000 AF to the City of Lodi is contingent on 20,000 AF of water being available under Permit 10477 as of May 1st of each year. The potential transfer period is the following October 15th to March 30th.

There was no water available under Permit 10477 as of May 2015, therefore there is no transfer for the period October 15, 2015 to March 30, 2016.

NSJWCD will notify the City by May 1, 2016 of water availability. If water is available for transfer, the City will submit a schedule to the NSJWCD by July 1, 2016.